IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

Claims 1-8 (canceled).

9. (new) A computer system, comprising:

a plurality of computers each having a computer port coupled to a network;

a plurality of storage apparatuses each having storage ports coupled to said network and logical units storing data from said computers;

a plurality of switch apparatuses each having switch ports coupled to either said computers or a storage system via said network; and

a management module that manages states of connections among said computers, said switch apparatuses and said plurality of storage apparatuses;

wherein said management module comprises:

a correspondence table which indicates relations between a plurality of symbols each indicating a port of said computers, said plurality of storage apparatuses and said plurality of switch apparatuses, and display coordinate values of a display screen,

a path table which indicates relations between said symbols and connections among said computers, said plurality of storage apparatuses and said plurality of switch apparatuses,

a connection state display module for displaying on said display screen a state of said connections in said computer system,

a zone table which indicates relations between a plurality of zones and said symbols indicating said computers, said plurality of storage apparatuses and said plurality of switch apparatuses, and

an input module for inputting a user's request for creating new connections among said symbols on said display screen and changing said connections among said symbols on said display screen,

wherein said connection state display module comprises:

a display module for displaying on said display screen said symbols of said computers, said plurality of storage apparatuses, and the state of said connections at positions indicated by said coordinate values in a graphic image, and

a create module for creating, by use of said input module, an area displaying said plurality of computers and said plurality of storage apparatuses on said display screen,

wherein said management module further comprises:

a display position comparing module for comparing, based on said coordinate values and said user's request, respectively a graphic image display position of said graphic image of said computers and said plurality of storage apparatuses in said connection state display module with a graphic image display position of an area created by use of said input module, and

a setting module for setting said plurality of storage apparatuses and said plurality of switch apparatuses according to a result of the comparison by said display position comparing module,

wherein said management module refers to, in response to zoning information, an area in said zone table and said correspondence table to display symbols for computer ports and storage ports included in a zone corresponding to said zone information on said display screen,

wherein said management module sets an access restriction to a logical unit not to be accessed from said computer ports when a symbol of said logical unit is placed out of said zone, and

wherein when said user's request includes an instruction for creating a connection between symbols of computers, storage apparatuses and said plurality of switch apparatuses not included in said zone table, said user's request is invalidated.

10. (new) A computer system according to claim 9, wherein the area created by said input module of said connection state display module in said management means overlaps with other areas; and

wherein said display position comparing module sets, when the area overlaps with other areas and the overlapped areas contain a graphic image of said computer or said storage apparatus, said storage apparatus and said switch apparatus according to a positional relationship between each of the areas and the graphic image based on said coordinate values and said user's request.

11. (new) A computer system according to claim 9, wherein the graphic image representing computers and storage apparatus displayed on said connection

state display module in said management module can be moved by said input module, and

wherein said display position comparing module compares, after the graphic image is moved by use of said input module, a positional relationship between an area and the graphic image and sets said storage apparatus and said switch apparatus according to a result of the comparison.

12. (new) A computer system according to claim 9, wherein said setting module also sets computers according to a result of the comparison by said display position comparing module.

13. (new) A method of managing a connection relationship in a computer system which includes a plurality of computers each having a computer port coupled to a network, a plurality of storage apparatuses each having storage ports coupled to said network and logical units storing data from said computers, and a plurality of switch apparatuses each having switch ports coupled to either said computers or a storage system via said network, said method comprising the steps of:

preparing a correspondence table which indicates relations between a plurality of symbols each indicating a port of said computers, said plurality of storage apparatuses and said plurality of switch apparatuses, and display coordinate values, and a path table which indicates relations between said symbols and connections among said computers, said plurality of storage apparatuses and said plurality of switch apparatuses;

displaying an area representing said computers and said plurality of storage apparatuses on a management screen;

displaying symbols of said computers and said plurality of storage apparatuses in a graphic image on said management screen;

displaying, on said management screen, a state of said connections in said computer system;

preparing a zone table which indicates relations between a plurality of zones and said symbols indicating said computers, and said plurality of storage apparatuses and said plurality of switch apparatuses,

inputting a user's request for creating new connections among said symbols on said management screen and changing said connections among said symbols on said management screen;

comparing, based on said coordinate values and said user's request, respectively information of positions of areas with information of positions of graphic images respectively of computers and said plurality of storage apparatuses on said management screen;

setting an interface for said storage apparatus according to a result of the comparison; and

setting an interface for said switch apparatus according to a result of the comparison,

wherein said management module refers to, in response to zoning information, an area in said zone table and said correspondence table to display

symbols for computer ports and storage ports included in a zone corresponding to said zone information on said display screen,

wherein said management module sets an access restriction to a logical unit not to be accessed from said computer ports when a symbol of said logical unit is placed out of said zone, and

wherein when said user's request includes an instruction for creating a connection between symbols of computers, storage apparatuses and switch apparatuses not included in said zone table, said user's request is invalidated.

14. (new) A method of managing a connection relationship in a computer system according to claim 13, further comprising the steps of:

changing a position and a size of an area on said management screen; and

changing a position of each of the graphic images respectively representing computers and storage apparatus on said management screen.

15. (new) A method of managing a connection relationship in a computer system according to claim 13, further comprising the step of:

when a position and a size of an area on said management screen is changed or when a position of each of the graphic images respectively representing computers and storage apparatus on said management screen is changed, determining for each area whether or not the computers and the storage apparatus have valid connectivity therebetween in the area.

16. (new) A method of managing a connection relationship in a computer system according to claim 13, further comprising the step of:

setting connection for the computers according to a result of the comparison of said positional information comparing step.

17. (new) A computer system according to claim 9, wherein said management module sets an access restriction to a logical unit when whose symbol is placed out of said zone not to be accessed from said computer port whose symbol being placed within said zone.

18. (new) A method according to claim 13, wherein said management module sets an access restriction to a logical unit when whose symbol is placed out of said zone not to be accessed from said computer port whose symbol being placed within said zone.